

REMARKS

Entry of the above amendments and reconsideration of this application are respectfully requested. Upon entry of the amendments, this application will contain claims 11-21 and 32-44 pending and under consideration. Of these, Claims 11-21 and 32-40 were prior examined. Claims 41-44 are new. Upon consideration of the above amendments and the following remarks, it is believed that this application will be found to be in condition for allowance. Action to that end is solicited.

Claims 13, 16, 37, 39 and 40 stand rejected under 35 USC § 112, second paragraph, based upon the allegation that they are indefinite. As to Claim 13, this rejection was applied because of its use of the trademark Teflon. In response, this claim has been amended to eliminate use of the trademark and to insert the corresponding generic term.

As to Claim 16, 37 and 39, this rejection was applied based upon the assertion in the Office Action that these claims are "indefinite for reciting a precursor material which is considered an impositive structure element.". It is not clear to the undersigned what was meant by this statement. However, it is believed that the Examiner may be asserting that the precursor material cannot be recited as a positive structural element of the claimed system. To the extent that this is the Examiner's finding, this basis of rejection is traversed. Claim 16 ultimately depends upon Claim 11, which is directed to a chemical reactor system. There is no rule or case law cited by the Examiner that a claim to a chemical reactor system cannot include a recitation of a precursor material as a part of the system that will be given patentable weight. In fact, to the contrary, MPEP 2143.03 and the supporting case law that it cites make it clear that each and every word a such a claim must be considered when determining its patentability:

2143.03 All Claim Limitations Must Be Taught or Suggested

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Furthermore, the Examiner has not given any reason or analysis as to why one skilled in the art would not be able to understand the meets and bounds of the precursor material as recited in the claims, nor could any such reason be found since the terms used in the claims are clear. Accordingly, it is requested that this rejection be withdrawn.

As to Claim 40, the rejection was applied because the claim recited "a high boiling point liquid". In response, to remove this rejection from issue, this claim has been amended in a fashion that eliminates the use of the term "high boiling point". This is without admission, as it is believed that in the context of the claims and specification, one skilled in the art would have understood the prior claim language.

In view of the foregoing, withdrawal of all rejections under 35 U.S.C. § 112 is solicited.

Claims 11-21, 32-34 and 37-40 stand rejected under 35 USC § 103(a) "as being unpatentable over MOISAN et al. (6,224,836) in view of MUTTERER, JR. et al. (6,258,329) and WARMBIER et al. (5,540,886) or LAUTENSCHLAGER et al. (6,033,912)." These rejections are traversed because this combination of references does not positively motivate the skilled artisan to do what is claimed, absent the use of hindsight by the Examiner.

The present claimed invention relates to chemical reactor systems designed for the generation of gases, such as those used in the semiconductor fabrication industry. Each of the claims presently pending in the application

requires an advantageous combination of features for generating such gases which is not taught, suggested or motivated by the references, not one of which is directed to chemical reactor systems designed to generate gases from precursors materials.

For example, the system of Claim 11 and its dependent claims requires a combination of elements including “a solvent vapor removal device adapted to remove solvent vapor from the generated gas, a gas concentration sensor for sensing gas concentration in the generated gas, and a feed-back control system adapted to control gas generation rate in said enclosure, and a supply vessel for containing a precursor material for forming said gas, said supply vessel fluidly connected to said reaction zone for feed of the precursor material to the reaction zone to generate the high purity gas”. The system of independent claim 32 requires a combination including a “gas concentration sensor for sensing gas concentration in the generated gas” and “a solvent vapor removal device adapted to remove solvent vapor from the generated gas”. The system of independent claim 41 requires a combination including “a solvent vapor removal device adapted to remove solvent vapor from the generated gas” and “a supply vessel fluidly connected to said reaction chamber and adapted to feed a precursor material to the reaction chamber for generation of said gas”. None of the references applied would teach or suggest such combinations of elements in systems as claimed.

In an attempt to reach certain claimed features, the Office Action recites that Mutterer “shows the use of a control system 20 operatively associated with sensors 17”. However, as is clear from the reference and the record, the control system in Mutterer in no way resembles that which is claimed. To the contrary, the control system in Mutterer amounts to the use of temperature sensors or electric chemical detectors “for monitoring the conditions of the vessel 16 and the reaction therein.” There is no disclosure of any desire or need to sense gas concentration in a generated gas, to control gas generation rate, to remove

solvent vapor from generated gas, or to have a connected precursor material supply vessel, as variously required in the claimed systems. Relative to the first Office Action, the second Office Action adds the Warmbier and Lautenschlager references in an attempt to reach the sensor and control features claimed. However, as noted above, neither of these new references is in any way concerned with the generation of gases in a controlled fashion from a precursor material. To the contrary, Warmbier appears to be related to the thermal or catalytic after-burning of waste gases, and Lautenschlager appears to be related to controlling a desired chemical reaction which is occurring in the reaction pot of the Lautenschlager system. Furthermore, Lautenschlager does not teach anything with regard to elements for processing gases for later use, for example by removing water vapor. As indicated, Lautenschlager is concerned with the reaction in the pot. Accordingly, the attempted combination of these latter two references is ineffectual to establish a *prima facie* case of obviousness with regard to the claimed systems.

For the foregoing reasons, it is submitted that the rejections of Claims 11-21, 32-34 and 37-40 under 35 USC § 103(a) are overcome and should be withdrawn.

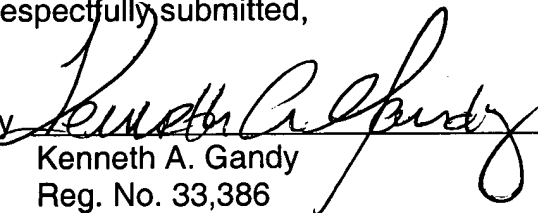
Claims 35 and 36 stand rejected under 35 USC § 103 (a) as being unpatentable over the above-mentioned four references and further in view of Ayers (5,158,656). However, as explained in detail above, the four first-applied references do not teach, suggest, or motivate one of ordinary skill in the art to make systems for the generation of gases that use microwave radiation sources, as claimed. Ayers adds nothing further in this regard. Accordingly, Claims 35 and 36, which are dependent upon Claim 32, are believed to be allowable at least for the same reasons as discussed above. Reconsideration and withdrawal of this rejection is thus also requested.

New Claims 41-44 have been added to the application. These claims are also believed to be allowable over the prior art of record. Favorable consideration of allowance of Claims 41-44 is therefore requested.

In view of the foregoing, allowance of this application containing Claims 11-21 and 32-44 is requested. The Examiner is invited to telephone the undersigned attorney if there are any questions about this submission or if there are other matters that can be so handled to expedite the allowance of this application.

Respectfully submitted,

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